

Applicant: James Mar
Application No.: 10/067,606
Filing Date: February 5, 2002
Docket No.: 669-78
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Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (previously presented): A device for plumbing drainage systems said device comprising:

a first tubing element having an attachment bell at one end and a first coupler portion at the other end;

a second tubing element having an attachment bell at one end and a second coupler portion at the other end, wherein said first and second coupler portions are sized and shaped to be coupled together; and at least one of said first or second tubing element is a generally u-shaped section sized and shaped to trap water therein;

a seal sized and shaped to fit between said first coupler portion and said second coupler portion, said seal being sufficiently flexible to form a liquid tight seal; and,

a connector to releasably couple said first and second coupler portions together, and to seat said seal between said first and second coupler portions.

Claim 2 (currently amended): The device of claim 1 further including an angle stop, for limiting said range of angles, said stop being sized, shaped and positioned to ~~ensure~~ prevent coupling

which creates an uphill rise to a downstream element of said first and second elements ~~is angled~~ to promote drainage.

Claim 3 (original): The device of claims 1 or 2 wherein one of said first and second coupler portions comprises a bulb and the other of said first and second coupler portions comprises a socket sized so that said bulb may be closely received within said socket, said seal being sized and shaped to be inserted between said bulb and socket to form a liquid tight seal.

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Claim 4 (original): The device of claim 3 wherein said bulb includes a part spherical outer surface.

Claim 5 (previously presented): The device of claim 4 wherein said coupling portion defines a tubular section for the passage of waste therethrough and said part spherical outer surface has a center of curvature located approximately on an axial centerline of said first or second tubing element.

Claim 6 (original): The device of claim 5 wherein said part spherical section subtends an arc of between about 30° and 60° in a vertical plane.

Claim 7 (original): The device of claim 1 wherein said connector may be tightened onto said coupler portions, said connector acting on said seal to form a leak resistant joint.

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Claim 8 (original): The device of claims 1 or 2 wherein said seal is in the form of a ring which is generally wedge shaped in cross section and which has an inner seal surface, an outer seal surface and a bottom thrust face.

Claim 9 (original): The device of claim 8 wherein said outer seal surface is generally conical.

Claim 10 (original): The device of claim 8 wherein said inner seal surface is sufficiently compressible to become part spherical.

Claim 11 (original): The device of claim 8 wherein said bottom thrust face is generally planar.

Claim 12 (original): The device of claim 8 wherein said seal is molded from a plastic material.

Claim 13 (original): The device of claim 8 wherein said seal is formed from a material which is at least partially compressible to form a liquid tight seal.

Claim 14 (original): The device of claim 12 wherein said seal is made from molded low density polyethylene.

Claim 15 (previously presented): The device of claim 1 wherein said first coupler portion and said second coupler portion define a generally wedge shaped gap therebetween and said seal is sized and shaped to be received in said wedge shaped gap.

Claim 16 (previously presented): The device of claim 15 wherein said connector is threaded onto one of said first and second coupler portions and includes a rim, said rim comprising a thrust surface for thrusting said seal into said wedge shaped gap.

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Claim 17 (withdrawn): A device for plumbing drainage systems, said device comprising:
a first tubing element having an attachment bell at one end and a first coupler portion at the other end;
a second tubing element having an attachment bell at one end and a second coupler portion at the other end, at least one of said first and second tubing elements being generally U-shaped and sized and shaped to trap water therein;
wherein said first and second coupler portions are sized and shaped to permit said first and second coupler portions to be snapped together over a range of angles to form a leak resistant joint.

Claim 18 (withdrawn): A device as claimed in claim 1 wherein one of said first and second coupler portions is a female part having a part spherical inner surface, and the other of said coupler portions is a male part having a part spherical outer surface.

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Claim 19 (new): A device for plumbing drainage systems said device comprising:

a first tubing element having an attachment bell at one end and a first coupler portion at the other end;

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a second tubing element having an attachment bell at one end and a second coupler portion at the other end, wherein said first and second coupler portions are sized and shaped to be coupled together; and at least one of said first or second tubing element is a generally u-shaped section sized and shaped to trap water therein;

a seal sized and shaped to fit between said first coupler portion and said second coupler portion, said seal being sufficiently flexible to form a liquid tight seal; and,
a connector to releasably couple said first and second coupler portions together, and to seat said seal between said first and second coupler portions;

wherein integrally part of said first or second coupler portions is an angle stop to prevent coupling which creates an uphill rise to a downstream element of said first and second tubing elements.
